Roll No. | | | | | | | | | | |

Total No. of Questions : 09

Total No. of Pages : 02

B.Tech.(ME) (2011 Onwards) (Sem.–5)

COMPUTER AIDED DESIGN AND MANUFACTURING

Subject Code : BTME-502

Paper ID : [A2129]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

Q.1 Write briefly :

(a) Differentiate between Translation and Panning.

(b) Write Euler-Poincare formula used in solid modeling.

(c) Define Fixed and Floating Zero.

(d) What is the role of mesh generation in FEM?

(e) Define "Flexibility" in Flexible Manufacturing System.

(f) Differentiate between Rotation Transformation and Rotate View.

(g) What do you understand by "Distributed NC"?

(h) What is the difference between Numerical Control and Adaptive Control?

(i) Illustrate STEP.

(j) Write parametric equation of Hermite Cubic curve.

SECTION-B

Q.2 a) Explain Adaptive Control. Derive Performance Index for ACO.

b) Draw ACC Lathe.

Q.3 With neat diagrams, explain different FMS Layouts.

Q.4 Describe application of computer in various stages of product and manufacturing engineering.

Q.5 Describe in detail General procedure of FEM. Also write its applications.

Q.6 Explain in detail CAPP and its types.

SECTION-C

Q.7 a) Write a note on need, evolution and elements of CIM.

b) What is GT concept in manufacturing? Explain GT coding system with example.

Q.8 a) Make a comparative analysis of the wire frame, surface and Solid modeling.

b) Describe how the data base is organized when building a solid model from the graphic primitives.

Q.9 a) Discuss three production situations in which FMS technology can be applied.

b) With neat diagram, describe different coding systems in Group Technology.